ANALISIS *TOTAL PRODUCTIVE MAINTENANCE* (TPM) PADA MESIN *OVEN* DI PABRIK ROTI BAKAR AZHARI

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Abstrak

Pabrik Roti Bakar Azhari adalah usaha mikro kecil dan menengah (UMKM) yang berlokasi di Rejowinangun, Kotagede, Kota Yogyakarta, yang memproduksi roti tawar. Permasalahan utama adalah mesin *oven* sering mengalami kerusakan berupa kebocoran pada loyang, tungku api keropos, dan regulator pengapian aus dan mengalami *downtime* selama 50 menit. Tujuan penelitian ini adalah untuk meningkatkan efektivitas mesin *oven* dengan menerapkan *Total Productive Maintenance* (TPM). Metode yang digunakan dalam penelitian ini adalah *Overall Equipment Effectiveness* (OEE), analisis *Six Big Losses*, *Fishbone Diagram*, menentukan pilar TPM berdasarkan delapan pilar TPM, dan rencana perbaikan menggunakan metode 5W+1H. Berdasarkan perhitungan *Overall Equipment Effectiveness* (OEE) diperoleh rata-rata sebesar 100%, maka nilai *Overall Equipment Effectiveness* (OEE) telah memenuhi standar *world class*. Berdasarkan analisis *Six Big Losses* terdapat jenis *losses* yaitu *Idling and Minor Stoppages* dan *Reduced Speed Losses*. Pada *fishbone diagram* terdapat 3 aspek yang mempengaruhi *Idling and Minor Stoppages* dan *Reduced Speed Losses* yaitu aspek manusia, aspek mesin, dan aspek metode. Untuk mengurangi *losses* pada *Idling and Minor Stoppages* dan *Reduced Speed Losses*, maka diterapkan pilar *Autonomous Maintenance* (AM) dan *Planned Maintenance* (PM). Usulan perbaikan difokuskan pada pelatihan tentang perawatan mesin *oven*, membersihkan tungku api secara berkala, mengatur suhu *oven* sesuai standar operasi, dan melakukan *checklist maintenance* setiap hari.

Kata Kunci: Kerusakan, *Total Productive Maintenance*, *Overall Equipment Effectiveness*, *Six Big Losses*, 5W+1H.

TOTAL PRODUCTIVE MAINTENANCE (TPM) ANALYSIS OF OVEN MACHINES AT AZHARI BREAD FACTORY

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Abstract

Azhari Bread Factory is a micro, small, and medium enterprise (MSME) located in Rejowinangun, Kotagede, Yogyakarta City, which produces white bread. The main problem in this factory is that the oven machine often experiences damage in the form of leaks on the baking sheet, a porous furnace, and a worn ignition regulator and experiences downtime for 50 minutes. The purpose of this study is to increase the effectiveness of the oven machine by implementing Total Productive Maintenance (TPM). The methods used in this study are Overall Equipment Effectiveness (OEE), Six Big Losses analysis, Fishbone Diagram, determining TPM pillars based on the eight TPM pillars, and repair plans using the 5W + 1H method. Based on the calculation of Overall Equipment Effectiveness (OEE), an average of 100% is obtained, so the Overall Equipment Effectiveness (OEE) value has met world class standards. Based on the Six Big Losses analysis, there are types of losses, namely Idling and Minor Stoppages and Reduced Speed Losses. In the fishbone diagram, there are 3 aspects that affect Idling and Minor Stoppages and Reduced Speed Losses, namely human aspects, machine aspects, and method aspects. To reduce losses from idling and minor stoppages, as well as reduced speed losses, the Autonomous Maintenance (AM) and Planned Maintenance (PM) pillars were implemented. Proposed improvements focused on training on oven machine maintenance, regular furnace cleaning, setting oven temperatures according to operating standards, and conducting a daily maintenance checklist.

Keywords: *Damage, Total Productive Maintenance, Overall Equipment Effectiveness, Six Big Losses, 5W+1H.*

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